REMARKS

Applicants respectfully request reconsideration of the application in view of the foregoing amendments and following remarks. Claim 1 has been amended. Claims 1-6 are currently pending in this application.

In response to the Examiner's objections to the drawings under 37 CFR § 1.83(a) and rejection of claim 6 under 35 U.S.C. § 112, first paragraph, Applicants respectfully submit that Figure 9B illustrates a collar 59 surrounded by a nut 60. As the Brief Description of the Several Views of the Drawings makes clear, Figure 9B is a partial cross-sectional elevational view. In Figure 9B a portion of the nut 60 is shown to illustrate its encircling relationship with the collar 59. The specification further highlights this relationship in the paragraph beginning at page 10, line 3, in which it states "...as illustrated in Figures 9A and 9B, a frusto-conical collar 59 is positioned on mixing tube 49, which in turn is held *via an interference fit* in a nut 60 that has threads 61 to engage a threaded inner surface 62 of a cutting head." (Emphasis added). One of ordinary skill in the art will appreciate that an interference fit between the collar 59 and the nut 60 in which the collar 59 is held, necessarily deduces to the nut 60 surrounding the collar 59. Accordingly, the specification, in combination with Figure 9B, provide support for a nut 60 surrounding the collar 59. Applicants therefore respectfully submit that claim 6 complies with the enablement requirement of 35 U.S.C. § 112, first paragraph, and every claimed feature is shown in the drawings.

Claims 1, and 4-6 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,018,670, to Chalmers. Claim 1, as amended, recites a collar rigidly fixed to an outer surface of the mixing tube in an upper region of the mixing tube, the collar being sized to slide upward through a bore of a cutting head and having a terminal end surface of the collar substantially normal to the longitudinal axis to bottom out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis, to prevent the mixing tube from being inserted any further into the bore of the cutting head, thereby locating the mixing tube longitudinally in a final desired position for use in the high-pressure fluid jet system. In contrast, Chalmers does not disclose a collar.

The structure in Chalmers that the Examiner equates to the collar of the present invention is a collet 93. The collet 93 of Chalmers cannot slide upward through a bore of a cutting head, a terminal end surface of the collar substantially normal to the longitudinal axis bottoming out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis. This is because "the outside surface of the collet 93 has tapered fingers 94 that fit in surface engagement with the tapered inside wall 92 of boss 90" (Col. 5, lines 30-33), preventing the collet 93 from bottoming out. Claim 1 has been amended to clarify the phrase "bottoming out". In order to precisely locate the mixing tube and preclude secondary locating measures such as an insert for locating the top of the mixing tube, the terminal end surface of the collar bottoms out against a surface of a member in the bore, both surfaces being normal to the longitudinal axis.

As explained in the specification of the present application, with the introduction of the collar, the mixing tube may be located precisely within the cutting head, wholly eliminating the need for a pin, insert, or other device known in the art to register the mixing tube. (Page 3, lines 28-30). Conversely in Chalmers, the lack of a collar requires that the device in Chalmers use an insert 72, the bottom of which engages the nozzle 87 to locate the upper end of the nozzle 87. (Col. 5, lines 14-16; Figure 9). As such, the pending claims are neither anticipated nor obvious in view of Chalmers.

Claims 1 and 6 are also rejected as being anticipated by U.S. Patent No. 4,945,688 to Yie, and claims 2 and 3 are rejected as being unpatentable over Chalmers in view of Yie. However, Yie also fails to disclose a collar. Even if the exit cone 20 of Yie were to be analogized to the collar of the present invention, the exit cone 20 of Yie does not have a terminal end surface of the collar substantially normal to the longitudinal axis provided to bottom out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis.

The Examiner identifies a region 701, asserting that the upper region 700 of the exit cone 20 bottoms out against the region 701. Applicants respectfully disagree because the region 701 identified by the Examiner is a cavity 54 disposed within the nozzle body 12; not a member against which the upper region 700 of the exit cone 20 can bottom out against. (Col. 3,

lines 59-60). Even if the exit cone 20 in Yie were to halt against the tapered portion of the nozzle body 12, defining the cavity 54, that would not constitute a terminal end surface of the collar substantially normal to the longitudinal axis bottoming out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis. In fact, such a scenario may interfere with the introduction of abrasives in that invention because the entryway of the abrasives in Yie is located on one of the tapered portions of the nozzle body 12 that defines the cavity 54. Accordingly, claim 1 and all claims dependent therefrom are allowable over Yie.

The Examiner further rejects claims 1 and 4-6 under 35 U.S.C. § 103(a) as being unpatentable over Chalmers in view of U.S. Patent No. 5,599,328, to Stevens. For the reasons discussed above, Chalmers does not teach or suggest a terminal end surface of the collar substantially normal to the longitudinal axis that bottoms out against a surface of a member in the bore of the cutting head substantially normal to the longitudinal axis. Hence, Chalmers uses an additional part, an insert 72, the bottom of which engages the nozzle 87 to locate the upper end of the nozzle 87. (Col. 5, lines 14-16; Figure 9). The omission of an element and retention of its function is an indicia of unobviousness. *In re Edge*, 359 F.2d 896, 149 USPQ 556 (CCPA 1966); MPEP § 2144.04.II.B. Therefore, when considering the present invention and the cited references as a whole, the claimed invention is not obvious over Chalmers.

Furthermore, the applicants continue to posit that Stevens is non-analogous art. The Examiner correctly asserts that in order for a cited reference to be analogous art, the reference must either be in the field of applicant's endeavor, or, if not, then be reasonably pertinent to the particular problem with which the inventor is concerned. See MPEP 2141.01(a). However, the applicants respectfully disagree with the Examiner's assertion that the particular problem in this case is connecting tubes adapted to deal fluid flow. As the Examiner correctly recognizes, it is the *particular* problem that is relevant when determining what is analogous prior art for the purpose of analyzing the obviousness of the subject matter at issue.

In this case, the particular problem with which the present invention is concerned is to provide an improved system for generating a high-speed fluid jet. In contrast, the particular problem addressed in Stevens is time-consuming and expensive processes relating to rotatable

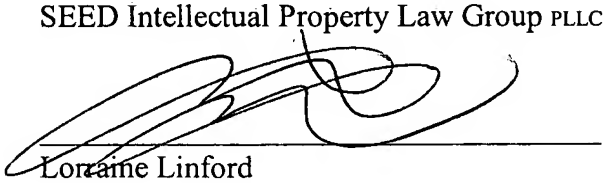
connectors for attachment to a medical device. A reference is reasonably pertinent if, it is one which because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. A medical connector for use in a patient's vasculature would not commend itself to the present inventors' attention in considering an improved system for generating a high-speed fluid jet. Accordingly, claim 1 and all claims depending from claim 1 are patentable over Chalmers in view of Stevens.

Applicants respectfully submit that claims 1-6 are allowable for the reasons discussed above. If questions remain, the Examiner is invited to contact the undersigned at the telephone number listed below.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



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